AMENDMENTS TO THE CLAIMS

Kindly amend the claims as follows:

1. – 7. (cancelled)

8. (currently amended) ~~The remote XRD means according to claim 1,~~ A remote XRD means for identifying a material in a volume of interest (VOI) comprising:
    a. at least one X-ray source targeted towards said VOI;
    b. at least one X-ray detector adapted to receive diffracted X-rays so an image comprising at least a portion of the obtained XRD patterns is obtained;
    c. a processor adapted to measure said patterns;
    d. a database comprising records of patterns' parameters characterizing predetermined materials; said database comprising records of materials that a notification should be provided when identified; and,
    e. alerting means adapted to issue an alert when a material is identified that is one of the materials for which a notification should be provided when identified;

    wherein the processor is adapted to measure at least a portion (≤ 360°) of the full Debye-Scherrer rings.

9. (original) The remote XRD means according to claim 8, wherein the processor is adapted to measure the central portion of the XRD patterns.

10. – 14. (cancelled)

15. (previously amended) A method for acquiring XRD images of a material in a VOI, comprising the steps of:
    a. receiving VOI coordinates from lower stage system;
    b. irradiating the material in the VOI;
    c. acquiring of Debye-Scherrer XRD patterns;
    d. extracting of Debye-Scherrer XRD patterns;
    e. converting said XRD patterns (e.g. rings) of said VOI to standard powder X-ray diffraction spectra;
    f. searching and/or matching records in a database for material identification; and then,
    g. alerting in case said material matches a predetermined record;

    wherein said method enables identification of suspicious substances within said VOI with substantially high efficiency.

16. (cancelled)

17. (previously amended) The method according to claim 15; wherein back-diffraction is provided.

18. (previously amended) The method according to claim 15; wherein the detector is a Cell-X, adapted for acquiring both VOI's XRD image and information about its energy profile.

19. (cancelled)

20. (cancelled)